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Annual Report

MADE BY THE

BOARD OF TRADE,

TO THE

COAL MINING ASSOCIATION,

OF

SCHUYLKILL COUNTY.

JANUARY, 1835.

POTTSVILLE:

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R E P O R T.

THE duty again devolves on the Board of Trade of presenting to the Association an account of the past year's operations, and their views of the Trade in general.

Three years have elapsed since the Coal Mining Association was organized, and during that brief period, many and great changes have taken place, but the Trade has advanced with a sure and steady pace, and has attained that station which warrants us in saying it is now one of the most considerable branches of production, which our state possesses.

The rugged hills of our region have become a busy theatre of active industry, and those tracts which ten years since could afford but a scant support to a few hardy woodsmen, now teem with a busy population, who by their industry (that true source of national wealth,) sustained by the enterprise, and funds of citizens drawn hither from other places, are daily extracting from the earth, her hitherto dormant treasures, and forwarding to the sea-board an article, which is destined e'er long to supplant, if not entirely supercede the use of wood as a fuel; nor is the comfort and economy of coal as a fuel its only recommendation; already has its safety been so well tested, that insurances on property in our cities have fallen far below their former rates, as fires are found to be less frequent, and as those devastating conflagrations formerly so common in our large cities, are now unknown where our staple is used. The value of property in those places has, in consequence, increased in the same proportion; in addition to which, every species of property on the line of the canal has risen in value. The property in Philadelphia in the vicinity of the Schuylkill, has advanced beyond the most sanguine expectations of the former holders; and that section of the city which but a few years since was a waste common, is now a busy mart of trade.

To the Coal Trade in a great measure, (if not entirely) this rise in the value of property is attributable, and when we reflect that the Trade is but in its infancy, we may with safety anticipate a still greater advance, and in a short period expect to see both banks of the river, lined with wharves, loaded with the product of our region.

The amount sent from this section during the past season as anticipated in our last report, was less than that of the preceding year, the causes assigned in our last, having, we fear, operated against the Trade throughout all its ramifications, as it is

found that both the other districts have experienced a like depression.

It was the opinion of the Board that with a healthy state of Trade, the consumption of the present year would amount to 600,000 tons; they still believe they were warranted in that estimate, by the known consumption of the preceding year, which they were enabled to ascertain from the following facts.

The extreme severity of the winter of 1831-32, caused all the coal then on hand to be consumed, and when the spring opened, the depots were drained and the business commenced with clear wharves.

In the year 1832 there was sent from all sources, rising 370,000 tons; the winter of 1832-33 being unusually mild, and the supply large in comparison with former years, it was found there was remaining unsold in all the cities on the 1st April, 1833, 70,000 tons, leaving for the consumption of the preceding year, 300,000 tons; the following year the supply was much greater, and the winter equally as mild as the former, if not more so, and from the best information we have been able to obtain, and that from sources to be relied on, there was on the 1st of April, 1834, unsold in all the cities, 120,000 tons. The following statement will exhibit the amount furnished and consumed in the time above stated.

April 1, 1832—none in market.

Sent this year from all sources,	373,871 tons
Remaining at all points and unsold	<u>70,000</u>

Consumed	303,871
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April 1, 1833—old stock remaining over 70,000 tons

Sent this year from all sources	<u>484,986</u>
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	554,986
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Surplus remaining at all points unsold	<u>120,000</u>
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Consumed	434,986
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April 1, 1834—old stock remaining over 120,000 tons

Sent this year from Schuylkill	224,242
Lehigh	106,244
Lackawana	<u>43,700</u>

In market at the close of the navigation	494,186
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By the above it appears that the increased consumption in 1833-34 over that of 1832-33 was more than 43 per cent, and that the whole stock on hand when the season closed, was but

59,200 tons, or 13 3-5 per cent over the actual consumption of last year.

The winters of 1832-33 and 1833-34 were both unusually mild, while thus far in the present winter the cold has been proportionally greater, and should it continue equally cold it is believed the supply on hand will not exceed the demand.

It is not the interest of the collier that a scarcity should be felt at any point, but that there should be a full and ample stock, in order that the consumer may at all times with safety rely on being supplied, as by this means only can we depend on our trade being regular; fluctuations are at all times injurious in every trade, but particularly so to the collier, his grand object should be a regular and steady market, and experience has taught us that low prices and a steady demand are far preferable to high rates with uncertainty. Most of us have witnessed the various fluctuations to which our business has been subjected from its commencement, but in no instance have we known the collier derive a benefit from a sudden rise. His contracts being generally made for given quantities, he is bound to supply at the contracted price, while the dealer, the boatman, and laborers, are the only ones who derive a profit from a sudden demand. We have, within the last three years, witnessed the price of freight to Philadelphia vary from 85 cents to \$3,75 per ton, while the price of Coal, as delivered by the colliers on their contracts, was unchanged.

The business requires that the mines should be constantly worked to preserve them in good order, for if neglected or suffered to lie idle, dilapidation soon takes place; in addition to which the workings being in what is technically termed surface coal, more faults are to be encountered than may be supposed to exist when the workings is below the water level, and the roof more firm, and in consequence the operations must be continued at all seasons and to a certain extent without regard to the demand. Until recently all the coal sent to market from this section was taken from seams above the water level, and even up to this time no fair experiment has been made on what is below.

The consumption along the line of the canal has regularly increased, (excepting for the last year, when, owing to the purchasers having delayed too long, they failed in getting a supply) and the rail roads diverging from Philadelphia have been a means of introducing the coal into the towns and villages around to a considerable extent.

The following account taken from the books of the Navigation Company, will exhibit the amount consumed along the line from the opening of the canal in 1825, to the present time—

1825	1,450 tons
1826	3,154
1827	3,372
1820	3,332
1829	5,321
1830	6,150
1831	7,848
1832	13,429
1833	19,432
1834	18,572

Within the last year an improvement has been made in the burning of lime, and the small coal and dirt heretofore deemed as useless, and indeed cumbersome about the mouths of the drifts, is now consumed for that purpose.

There was imported into the United States in the year ending September 30th, 1834, 1,626,185 bushels of Bituminous Coal, being 721,852 bushels less than was imported in the preceding year; the annual exports has not been ascertained correctly, as no return has been made up to this date.

To make up the whole amount of Bituminous coal annually consumed on the seaboard has, for some time, engaged the attention of the Board, and they have made some progress in that investigation, but as their table is not yet fully completed, owing to the difficulty of obtaining correct information from some tracts, they must defer until a future meeting the presenting of that exhibit; in it they wish to present at one view, the whole amount raised and consumed throughout the whole extent of the seaboard, and to give correct data for future estimates. When that is completed they will be able to lay before you an account that will place the trade in such a light as will enable all to form correct conclusions.

The number of Boats on the canal remains about the same as last year, when they were estimated at 570; those then in use had undergone repairs when needed, and were generally in good order; and although but few new ones have been built, they have been still sufficient to supply the place of those that were drawn off as unfit for further service.

The price of freight has been lower throughout the season than was ever before known, but it is believed that the increased facilities offered by the improved state of the canal, and the enlarged size of the boats will enable us to send to market next season without any material *advance* being required.

A large number of boats remained idle during the last season, and are scattered along the canal in secure places; many of those will necessarily require repairs, but when put in order and added to the stock now in use, it is believed there will be sufficient for the trade next season.

The tonnage of the boats has gradually increased since 1825, and can be still farther augmented when the trade has attained that point to require it. The following table will give the increased amount up to this date—

<i>Years.</i>	<i>Number of trips.</i>	<i>Tons carried.</i>	<i>Average tons per Boat.</i>
1825	260	6,500	25
1826	652	16,767	25 15-20
1827	1183	31,360	26 10-20
1828	1751	47,284	27
1829	2909	79,973	27 10-20
1830	2978	89,984	30 4-20
1831	2338	81,854	35
1832	5961	209,271	35 2-20
1833	6054	250,588	41 7-20
1834	5167	224,242	43 8-20

The boats on the canal give employment to two men and one boy each, exclusive of horses, making an aggregate (when all employed) of 1140 men and 570 boys, independent of the persons employed in loading and unloading, as also those stationed on the line of canal.

It should be borne in mind that the persons abovementioned are employed in transporting the coal to tide water only, and that the same number of persons, as also the same amount of tonnage, are required to transport it from that point to the different places along the coast, where it is required for consumption.

Thus it appears that the trade on the Schuylkill alone gives employment to 24,733 tons for internal trade, and a like amount (excepting so much as is consumed along the line of canal and in Philadelphia) for coasting, together 49,466 tons, an amount exceeding any other branch of trade in the United States. If to this be added the amount sent from the Lehigh and Lackawana and the Bituminous coal raised in Virginia, it will not fall short of 80,000 tons, an amount that will bear a comparison with that of many of our commercial cities, and from the certain increase that will take place, we have good reason to expect that Congress will continue to sustain a Trade that may with propriety be called a nursery for our seamen.

The canal was opened on the 13th of March and closed by the frost on the 15th of December, giving 276 days. In its present state it is estimated as able to transport 800,000 tons, and by deepening it one foot the boats may be enlarged and the transit increased without any material loss of water; but the Schuylkill

is capable of still greater improvements, and it is believed that the day is not far distant when the present canal will give place to a slack water navigation sufficient to admit vessels to load at our wharves here, and carry our product direct from this place to the most distant part of our extended coast.

In our last report we stated our intention of addressing the Navigation Company, on the subject of a reduction of Tolls and other charges; that subject was promptly attended to and the correspondence is now laid before the association together with other correspondence and communications.

The Company during the last season reduced the number of ferries by erecting bridges, but declined acting on the subject of toll at that time,—we have every confidence that they will, e'er long, comply with the just proposition made, and put the collieries of this section on a more favorable footing.

The dam erected by the Company on Tumbling Run (to serve as a reservoir for the canal) has been of material service and fully answers the purpose for which it was made, and although the past summer was dry and the springs lower than they had been known to be for many years previous—the canal was amply supplied from that source, and no interruption in the trade was experienced.

The dam is estimated, when full, to contain 24,000,000 cubic feet of water, equal to the contents of 3,000 locks. The Company are erecting another dam on the same stream, about half a mile higher up, which will contain about 50,000,000 cubic feet of water. When this is completed all fears of a scarcity, even in the dryest season, will have vanished.

The Tumbling Run is a strong and regular stream, pursuing a course of about nine miles between the Second and Sharp Mountain,—and from its rapid fall is capable of affording a succession of Dams, at short distances throughout its whole course, if found requisite.

The free and unlimited use of the water of the Schuylkill by the Navigation Company, has created fears in the minds of many of the citizens of Philadelphia, that as the trade increases the supply of water for city purposes will be curtailed, and eventually rendered very precarious; already have disputes arisen between the City Authorities and the Navigation Company on that subject,—but a plan has been proposed which, if carried into effect, will prevent the much dreaded scarcity, and add materially to the accommodation of the Coal Trade.

The plan contemplated is to continue the Canal from Fair Mount dam (where it now terminates) along the western side of the river to Mill Creek, a distance of $2\frac{1}{2}$ miles, where if necessary that stream may be introduced as a feeder, and as there will be no outlet necessary, all the water for that side may be retained in the canal, or the water from Mill Creek may be thrown

into Fair Mount Dam, and thereby increase the supply and aid the trade for those Boats that enter the River to discharge on the Eastern bank.

To effect an object so beneficial to the Trade, and as your Board think to the City also, a law is necessary to enable the projectors to carry it into effect, as the act authorising the construction of a canal confers no power on the Company to extend their works beyond their present termination, an application is now before the Legislature for such a law, and we have every confidence that when fairly viewed and considered, it will receive their sanction.

To accommodate the trade, even in its present state, the wharf room is scarcely sufficient, and should it increase in the same ratio as it has done since the commencement, in a few years the present grounds will be wholly inadequate, independent of the heavy amount of Bituminous coal, iron, lumber, and other articles that will be sent from the Susquehanna by the Danville Rail Road and Union Canal.

Should the proposed plan be carried into effect, an ample space will be given, and that portion of our product designed for a foreign market, may be shipped at a much less expense than at present.

The elevation of the canal above tide water is such, that by enlarging it opposite the wharves, so as to admit of bringing boats near to *the margin of the docks*—chutes may be erected and the Coal discharged immediately into the vessels destined to convey it to a foreign market, by which means it will be shipped perfectly clean and in good order, without the labor and wastage incident to the repeated handling of the present plan.

The Board have long been desirous of procuring a correct map of the Coal Region, and have exerted themselves to secure the talents of a gentleman qualified for that undertaking; and they feel gratified that they are able to announce to you, that such a work is in progress and will soon be completed.

The work has been undertaken by Mr. Samuel B. Fisher, an experienced civil engineer, who has devoted much time to acquire an intimate knowledge of the Region, as also the owners of the several tracts, and the location of the different seams of coal, as far as they have been ascertained.

The subject will occupy two maps: the first of which, on a scale of 1 5-8 inches to the mile, will take in the Coal Fields of the Schuylkill, Little Schuylkill, Lehigh, Beaver Meadow, Mahanoy, Lykens Valley, and Swatara, covering a space of fifteen miles from North to South, and forty miles from East to West; and will lay down each tract with the original patentee, the number of acres, date of survey, and, as far as possible, the names of the present owners.

The Second, on a scale of 3 inches to the mile, will include

the Schuylkill Coal Field only, and will give a view of the different tracts, streams, rail roads and branches, and all the beds now opened.

A Book will accompany this last, giving an accurate account (taken from measurement) of all the openings, the thickness and pitch of the Beds, and quality of the coal.

The Board have examined the work during its progress, and recommend it to the attention and support of the Association: they believe it to be a correct delineation of the Region: the location of the beds of Coal are accurately marked, and their character correctly given; they will continue their aid to Mr. Fisher, until it is completed, which they expect will be in all this winter; and they have every hope that a work, combining so much useful and correct information, will meet with such support as will indemnify the compiler for his time and labor, so usefully directed.

That iron ore did abound in this section, was believed by many; but it was only during the past summer that the fact was fairly proved. In examining some of the tunnels (driven through the coal measure, and at right angles with the seams of Coal) the ore was found, laying in regular veins, in the immediate neighborhood of the Coal, and in such quantities as to warrant the assertion, that it will be worth working. It is of the two kinds usually denominated Kidney and Bog ore, and from experiments made, is found capable of being worked with Anthracite Coal.

A trial was made at the furnace of Messrs. Buckley & Swift, which resulted in giving a sufficient quantity of iron, to prove that the plan would answer, when fairly tested.

A trial at refining Iron with Anthracite Coal was also made by the same gentlemen, in a reveratory furnace, and was crowned with complete success.

A similar trial was made near Boston, some time since, and more than one hundred tons refined.

A patent has been taken out by our townsman, Mr. Thomas S. Ridgway, for making Iron with Anthracite Coal. By his plan the sulphur is driven off from the Coal, and the ore carbonized by the same fire that smelts it, and the blasting and reveratory furnace, are both embraced in one stack.

The model has been examined and approved by experienced iron masters, and they all agree that it combines all the requisites for smelting and refining iron.

The discovery of iron ore in the immediate vicinity of the Coal, and the plan of smelting it with Anthracite, will open a new prospect to all engaged, and we may with certainty look forward to the day, when this section will realise the expectations of those who have embarked their hopes in it.

In England the smelting of one ton of iron is estimated to

consume seven tons of coal; and to convert the pigs into bar iron three tons more are required, but as our coal contains a much larger portion of carbon than the Bituminous, and does not suffer the loss that is incident to cokeing, it is believed that to manufacture one ton of bar iron, from the ore, five tons of Coal will be sufficient. This branch alone will consume a vast quantity of our coal, but when to this is added the manufacture of other articles which must be located where fuel is abundant, the increased consumption will be immense. Experience has taught that the manufactory of most articles can be conducted with more economy in a coal district, than any other; and accordingly we find that all the great manufacturing towns in England are located in the immediate neighborhood of the Coal Fields.

The Coal consumed annually in England is estimated at 18,000,000 tons, exceeding one ton for every inhabitant. In this country it is but partially used, but the increase has been rapid, and a short period only is required before it will reach an amount that would at this day be too great to be credited. Already has it been used to some extent for steam purposes, and a further consumption must take place when the wood is cleared from the margin of the streams traversed by steam boats; which, from the rapid manner in which it has disappeared within the last ten years, makes it certain that another like period cannot elapse, before the expense of procuring fuel of that kind will exceed that at which Coal can be delivered for.

The Association was formed for the purpose of collecting and disseminating information on subjects connected with mining, and your Board have studiously avoided every point irrevalent to that object.

'They have viewed the Coal Trade as one that is in an infant state, in this country, and requiring the united aid and support of ALL, to bring it to a successful issue. They view it as a trade capable of great improvement, and that as all are but new in it, all should throw their experience in the general stock, that the whole may derive the benefit.'

Acting on this principle, they have pursued the one grand object, that of knowledge of and improvement in the trade, and they feel gratified that the result has, thus far, answered their fullest expectations.

Respectfully submitted.

B. H. SPRINGER, *President.*

POTTSVILLE, JANUARY 5, 1835.

AT a meeting of the COAL MINING ASSOCIATION, held at the Pennsylvania Hall, January 5, 1835, the following persons were unanimously elected officers of the Association for the ensuing year:—

President—BURD PATTERSON.

Vice President—JOHN C. OFFERMAN.

Treasurer—*Samuel Lewis.*

Secretaries—Andrew Russel and Charles Lawton.

Board of Trade—Samuel Brooke, Samuel Lewis, Thomas C. Williams, Samuel J. Potts, Martin Weaver, G. G. Palmer and James Wilde.

B. H. SPRINGER, President of the Board of Trade, having resigned, it was

Resolved, That the thanks of this Association be tendered to Mr. Springer, for the ability, research and diligence that he has evinced in the discharge of his duties as the President of the Board of Trade, and while we regret his intended removal from among us, we sincerely wish success to his intended establishment in the Coal trade in Philadelphia, and the Secretary is requested to communicate this resolution to Mr. Springer, and append it to the Report.

Extract from the Minutes.

C. LAWTON, Secretary.

At a meeting of the Board of Trade on the same evening, G. G. PALMER, was elected President, and T. C. Williams, Secretary.